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A
S U P P L E M E N T
To the several
A L M A N A C K S

For the Year of our Lord God, 1752, 3, &c.

In which are contained,

- I. An Account of the Method of computing Time in the earliest Ages, and among the most distant Nations.
- II. A Detail of their several Advantages and Defects, and the Differences between them fairly stated and reconciled.
- III. A full and accurate Account of the Differences between the Old and New Styles, together with plain and infallible Rules, to find it readily and easily.

Very necessary at this Time.

By C. B R O W N,
Author of the *Abstract* of the *Holy Bible*, and may be bound with it.

*Tempus est intervallum mundi et motus,
Id divisum in partes aliquot,
Maximè solis et lunæ cursu;
Ab eorum tenore temperato Tempus dictum.*

Cic.

L O N D O N:

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A
S U P P L E M E N T
T O T H E
A L M A N A C K S

For the YEAR 1752, 3, &c.

TIME, according to the Doctrine of *Metaphysics*, is the Continuance of the Existence of any thing, which flows equally in itself, without Relation to any external or material Being; and is the same with *Duration*; this is called *absolute Time*, and in the Properties of *Entity*, is that Part of *Philosophy* which treats of *Forms* in general, abstracted from *Matters*, and of such Beings as are above bodily Things, as *God*, *Angels*, &c. Now this Sort of *Time* was from *Eternity*, before the *Chaos* was formed or the *World* made. There is a *Time* in *Musick*, such as double and triple *Time*, by which every *Note* has its due Measure. But *Time* we are now going to speak of, is, in *Philosophy*, natural *Time*; which is also called relative *Time*, and is depending on the Estimation of the Motion of the *Luminaries*, and is a certain Measure both sensible and external, by which the Distance and Duration of Things are to be understood. These are called in *Astronomy*, Heavenly Bodies; such as the *Sun*, *Moon*, *Stars*, *Planets*, and *Comets*, of which I shall treat in another Place.

Though *Time*, considered in an abstracted and philosophical *Light*, was certainly coeval with the *Deity*, since nothing can possibly exist but in some Portion of it; yet the Mensuration of *Time* is an Affair of a widely different Nature, & Subject, about which most Nations of the World have differed, but a Subject of the last Importance to *Mankind*; since we find from the *Records* and *Annals* of the most ancient *Empires*, the *Archives* of the most illustrious *Heroes*, and even the *Memoirs* of *Families*, the Heads of which have moved in a lower *Sphere*, that the opposite and contradictory Methods of calculating *Time*, have often produced fatal *Revolutions* in *Empires*, deplorable Alienations of Property, with respect to hereditary *Crowns*, and even the highest Degrees of Injustice to *Individuals*, whose Right, perhaps, to immense Riches, was unquestionable, had it not been for the

Distraction and Perplexity of *Chronologers*, who sometimes from Ignorance, and as often from Prejudice, misrepresented Things of the highest *Moment* and *Circumstances*, which however seemingly trifling in their Eyes, may yet contribute either to the Misery or Happiness of future *Ages*. These Considerations, when maturely weighed, must certainly induce every wise and virtuous *Man*, to wish that *Time* could be universally measured and divided in such a Manner, as to prevent these terrible Misfortunes, from whatsoever Cause they may arise. This is, no Doubt, a hard and difficult Task. During the general *Chaos*, or that Period when the Matter of which this beautiful and harmonious *Fabrick* of the *Universe*, was what *Ovid* calls *rudis indigestaque Moles*, a rude and indigested Heap, there were no human Beings, and consequently no Occasion for any Arts and expedients to measure *Time*. But as soon as the World was made a fit Habitation for *Man*, the Mensuration of *Time* became necessary on many *Accounts*; our Pleasure and our Interest equally engaged us in something of this Kind, but we have been long defective in our Researches, and bewildered in our Conclusions. Of this I shall give the Reader a full and satisfactory Proof, by tracing the various Methods of computing *Time* from the earliest *Ages*; and shew, that as happy *Britain* has the Advantage of all other *Nations* in other Respects, she has not less the Superiority over them in point of computing *Time*, as the Reader will easily see by the *Series* of *Methods* recorded in this *Work*, the Account of their Defects and Imperfections, the Difference between the *Old* and *New Stile*, and the Demonstration of the Latter being infinitely preferable to the former.

To speak in the Praise of *Learning* in general here, would be a Theme very needless, none doubting the Excellency and Necessity thereof; knowing that the *Antients* ever had it in the greatest Esteem; *Solomon's* Desire was not *Riches*, but *Wisdom* and *Understanding*, that he might govern so mighty a People. *Rome* saw her best Days under the learned *Emperors* and *Kings*; and the *Persians* would elect none but *Philosophers* for their *Kings*. But to speak a little of those Branches, that accrue to my present Subject, may not be unacceptable.

After six Days that the Lord made *Heaven* and *Earth*, and all therein contained, he made *Man* of intellectual Powers and Faculties; and as the *World* increased in its Numbers, it was necessary for *Man* to study and know the End of his *Creation*, and the Reason of Things. Hence it was that *Astronomy*, *Geometry*, and *Chronology*, became useful *Sciences* for the Good of Mankind; yet these *Arts* were not brought to Perfection till of latter Years, as hereafter will appear.

Astronomy is the Science of the Magnitude and Motions of the *Heavenly Bodies*, and is comprehended under the Science of *Cosmography*, which describeth the *Universe*. According to the *Ptolemaic Hypothesis*,

Hypothesis, the *Terrestrial*, or Elementary Part, containeth the Element of *Fire*, next to the Sphere of the *Moon*; and next below that is the *Air*, and next to that the *Water*, and the lowest is the *Earth*. The *Celestial*, containeth eleven Heavens or Spheres, which in ascending are, 1st, the Sphere of the *Moon*, 2d, *Mercury*, 3d, *Venus*, 4th, the *Sun*, 5th, *Mars*, 6th, *Jupiter*, 7th, *Saturn*, 8th, the *fixed Stars*, commonly called the *Firmament*, 9th, the *Chrystalline Heaven*, 10th, the *Primum Mobile*, 11th, the *Cælum Empyreum*, or Heaven of Heavens, where God and his Angels are said to dwell. The Magnitude of these *Heavens* is known by their Courses, which those great *Bodies* within them make round the *Poles* of the *Zodiack*. The *Moon* runs through the Heavens by her natural Course from *West* to *East* in 27 Days 8 Hours, *Mercury* in 88 Days, *Venus* in 225 Days, the *Sun* in 365 Days and 6 Hours, *Mars* in about 2 Years, *Jupiter* in 12, and *Saturn* in 30 Years; the 8th Heaven perfects its Course, according to *Tycho Brahe**, in 25400 Years. These Heavens are turned round about upon the Axis of the World by the 10th Heaven, the *Primum Mobile*, or first Mover, by which Motion is caused Day and Night, and the daily Rising and Setting of the Heavenly Light. This System is the most ancient, and by some thought more consonant to the Letter of the Scripture than the rest. It was first invented by one *Claudius Ptolemæus*, a Native of *Peleusium* in *Egypt*, *A. C.* 135, who wrote several Books on this Subject, placing the Globe of Earth and Water in the Centre of the World, and supposed it destitute of all Motion; which according to the *Copernican* System is universally rejected; next to the *Earth* he placed the *Air*, with Vapours and Exhalations, which raising itself only a few Miles above the Earth, is called the *Atmosphere*; next to that he placed the Element of *Fire*, and in the Spaces above, he ranked the Planets in the same Order before rehearsed: All these massy Orbs, and vast Bodies borne by them, are, in this System, supposed to move round the terraqueous Globe. But,

The *Copernican* System is the most generally received by our Modern *Astronomers*, and was revived by *Nicolaus Copernicus*, a Physician of *Thorne* in *Prussia*, and Canon of *Frassenburgh*, the Cathedral of *Wamerlandt*, *A. C.* 1536. He framed this System or Hypothesis in Imitation of *Pythagoras*, who attributed a Motion to the *Earth*,

* An ingenious Nobleman of *Denmark*, Lord of *Knudsborg* in the Isle of *Schonen*, who in his Hypothesis takes in Part both the *Ptolemaick* and *Copernican* System, and called the *Tychonean* System. There is also a System called the *New System*; which extends the Universe to a far more immense Compass, than any of the other: It agrees with the *Copernican*, as to the System of the *Sun* and its *Planets*, but it farther supposes many other Systems of *Suns* and *Planets*, and is much admired at this Time.

and placed the *Sun* in the Centre of the World ; and assigns the same Place to the *Earth*, which *Ptolemy* allows the *Sun*, making the *Earth* a *Planet*, having annual Motion about the *Sun*, which was fixed ; and this Opinion is received by all our ablest *Astronomers*, for Reasons hereafter mentioned. According to this System, the *Sun* is supposed to be the Centre, and the Heavens and *Earth* to revolve round about him according to their several Periods ; *Mercury* in near 88 Days ; *Venus* in somewhat above 224 Days ; then the *Earth*, with its *Satellite* the *Moon*, in $365\frac{1}{4}$ Days ; *Mars* in about 687 Days ; *Jupiter* with his four *Moons* in about 4333 Days ; and lastly, *Saturn* in somewhat above 10759, with his five or more *Moons* revolving about him. And beyond or above all these is the *Firmament*, or the Region of the *Fixed Stars*, which are all supposed to be at equal Distance from their Centre the *Sun*. This System is far more agreeable to Nature, which never goes a round-about Way, but alway acts by the most compendious, easy, and simple Methods. In the *Copernican* Way, that is performed by one, or a few easy Revolutions, which in the other Way it made the Work of the whole Heavens ; and by which they were forced to contrive such Circles, as they called *Eccentricks* and *Epicycles*, crossing and interferring with one another ; a detail of such Incoherences and Impropietors as would be endless to treat of. The principal Texts of *Scripture* which seem to assert the *Immobility* and *Stability* of the *Earth*, are in 1 *Chron.* 16. 30. *Psal.* 93. 1. 96. 10. 104. 5. 119. 90. and *Eccles.* 1. 4. Those which mention the Motion of the *Sun* and Heavenly Bodies, are such as ascribe Rising, Setting, or standing still, to them ; *Gen.* xv. 17. and xix. 23. *Josh.* x. 12, 13. 2 *King* xx. 10. *Psal.* xix. 5, 6. *Eccles.* i. 5. *Isai.* xxxviii. 8. These are the chief Texts of *Scripture*, which seem to lie against the *Copernican* Hypothesis. In answer to which this may be said in general to them all ; that since the Design of the holy Writings is not to instruct Men in philosophical, but divine Matters, we take them to be spoken according to the vulgar Notions and Opinions which Men had of them ; and after this Manner the *Copernicans* themselves say the *Sun* riseth, setteth, and moveth, &c. I shall here only observe, that in *Joshua* the *Sun* is ordered to stand still in upon *Gibeon*, and the *Moon* in the Valley of *Ajalon*. It would be very absurd to take this in a literal Sense, and imagine those two great Luminaries were confined to those two Places, otherwise than in Appearance to the victorious *Israelites*. Therefore why not the Shadow in *Hezekiah's* Case to be attributed to an Arrest of the *Earth's* Motion rather than the *Sun* and whole Heavens, agreeable to the *Copernican* System. Consequently, Day and Night are established by the *Earth's* Rotation, or turning round on its *Axis*, which Occasions the

daily

daily Rising and Setting of the heavenly Light, to continue by God's special Appointment till Time should be no more.

Geometry, originally signified the measuring of the Earth or Figures, and Circles of the Heavens; but it is now also used for the Science of Extension, or Compass of a Thing in Length, Breadth, &c. abstractedly considered, without any Regard to Matter; for as *Arithmetick* concerns Number and Multitude, so is Magnitude and Greatness the Subject of this Science, which *Philo* the Jew, calls the Principle and Mother of all the Arts of Mechanism, and has particular Relation to the Science of *Astronomy*.

Now to return to our former Subject, in regard to the Calculation of Time. The *Antediluvian* World had probably but 360 Days in their Year, therefore it was easy for the first *Astronomers* to divide the Sun's annual Course into 60 Parts, long before *Geometry* arrived at Perfection enough to afford a Reason for the chusing to divide Circles into that Number of Degrees; *Chronology* * was then fixed, and a Year could be more exactly Measured: But at the Flood of *Noah*, the Heavens underwent some Change, and the Sun's Revolution was altered to five Days and almost six Hours longer than it was before, which most of the *Philosophers* have observed, and set right their *Chronology* by it; and this is the Art of computing Time, for knowing when any memorable Action has been done in Empires, Kingdoms, Battles, Sieges, &c.

The *Chaldeans* were the first, unless we except the *Chinese*, (who are to be suspected on Account of their fictitious Tradition of *Eclipses* ||) that we meet with in History, who made Observations upon the Stars; and the first Correction of the Year which we read of, was made in *Egypt* †, and *Syncellus* says it was by *Affis* King of *Thebes*, about a thousand Years after the Flood ‡; he added five Days to the ancient Year, and inserted them at the End of the twelfth Month. But this did not bring the civil Year up to an exact Measure with the Solar; though it put *Chronology* in a State which it continued in for some Ages. The *Egyptian* Year consisted of twelve Months, each Month containing thirty Days, the first was called *Thyoth*, beginning as fixed by *Augustus Cæsar*, upon his Reduction of *Egypt*, upon August 29. Second *Pasphi*, September 28. Third *Athyr*, October 28. Fourth *Ghoiac*, November 27. Fifth *Tybi*, December 27. Sixth *Mecbeir*, January 26. Seventh *Phamenoth*, February 25. Eighth *Pharmuthi*, March 27. Ninth *Pachon*, April 26. Tenth *Payni*, May 26. Eleventh *Epephi*, June 25. Twelfth *Mesori*, July 25.

* See Sir *Isaac Newton's* astronomical Principles of Chronology.

|| See Father *Couplet's* History of *China*.

† *Herodot.* L. 2.

‡ *Syncell.* p. 123.

The additional five Days began *August* 24, and ended the 28; that the first of *Thyoth* next Year, might be *August* 29, as above.

About 1600 Years after the Flood, the *Babylonians* corrected their Year, which agreed exactly with the *Egyptians* in Number of Months, and of equal Lengths; only the former did not begin in *Autumn*, as the fixed Year of the *Egyptians* did; but from the End of our *February*, when *Nabonassar* began his Reign, which commenceth the famous *astronomical Æra* §§, called by his Name, the *Nabonassarean Year*.

The ancient Year of the *Medes*, was the same with the *Nabonassarean*, which was received at the setting up the *Median Empire*; therefore the *Medes* begun their Year agreeable to it. Dr. *Hyde* * supposes the ancient *Syrian*, *Chaldean*, *Sabæan*, and *Persian* Year, to be the same with the *Median*; but Dean *Prideaux* || was of Opinion, that the *Persian* Year consisted but of 360 Days, in the Reign of *Darius*.

Thales, *Pythagoras*, and *Plato*, were the most eminent Masters of the *Greek Learning*, all the other *Philosophers* being only Explainers, or rather Commentators on their Works; and it is remarkable, that these great Men acquired most Parts of their *Philosophy* by their Travels, and from the Records of other Nations. *Laertius* † owns, that *Thales*, *Pythagoras*, *Eudoxus*, and many others, went into *Egypt*, to be instructed in the *Siderial Science*, and that *Pythagoras* lived in Society with the *Egyptian Priests* seven Years, and was initiated into their Religion, carried home from thence, besides several geometrical Inventions, the true System of the Universe; and was the first that taught in *Greece*, that the Earth and Planets turned round the Sun, which was immoveable in the Centre; and that the diurnal Motion of the Sun and fixed Stars was not real, but apparent, arising from the Motion of the Earth round its Axis; which our great Sir *Isaac Newton* has since found out and proved, that the Sun also has Revolution on his own Axis, which he finishes according to the *Ptolemaic Account*, in 365 Days and about six Hours, of which I shall treat more largely hereafter.

Thales was the first that corrected the *Greek Year*, about 50 Years after *Nabonassar*. He learned in *Egypt*, that the Year consisted of 365 Days, and endeavoured to settle the *Grecian Chronology* to a Year of

§§ *Æra*, is a particular Account and Reckoning of Time, from some remarkable Event; as from the Creation of the World, the Destruction of Troy, the Building of Rome, the Nativity of Christ, &c. the last of which is called the *Christian Æra*.

* *Rel. vet. Pers. c. 14.*

|| *Connect. Vol. 1. Ann. ante Christum 509.*

† *Diogenes Laert. in vit. Thaletis.*

of that Measure. But *Plato* and *Eudoxas* † were the first that found out a Deficiency of almost six Hours in *Thales's* Year, which was not immediately received all over *Greece*; for *Solon*, in the Time of *Cræsus* King of *Lydia*, was ignorant of the Matter; he having determined it one Way, and *Thales* another.

At that Time, no-body was esteemed a *Philosopher*, but who was well acquainted with the mathematical Sciences of *Astronomy*, *Geometry*, and *Chronology*: But these Sciences were soon neglected by most of the succeeding *Philosophers*, except the *Pythagorean Sect*, which flourished in *Italy*, many Years after. The *Ptolemies*, Kings of *Egypt*, were also great Patrons of Learning, and founded an Academy at *Alexandria*. But when *Egypt* was conquered by the *Saracens*, and *Alexandria* reduced under their Jurisdiction, the Conquerors took *Astronomy*, and all the other liberal Arts and Sciences along with them under their Protection, and most Part of their Books concerning them, they translated from the *Greek* into their own *Arabian Language*. The *Saracens* passing from *Afric* into *Spain*, and having Commerce with the western *European Nations*, imparted to them these particular Sciences we are now treating of, viz. *Astronomy*, *Geometry*, and *Chronology*, which before were almost lost in *Europe*. In the Year 1230, the Emperor *Frederic* commanded *Ptolomy's Almagist*, or great *Syntaxis*, to be translated from the *Arabic* into *Latin*: And after that Time these, particularly *Astronomy*, received many Improvements from the Patronage of the greatest Princes, and the Labours of the most celebrated *Philosophers*. And among all others, it is to the immortal *Sir Isaac Newton's* sublime Genius, we owe our Knowledge; why all the celestial Motions are continued in such wonderful Regularity, Harmony, and Order, as by the infinite Power and Wisdom of God, they do appear in the Appointment of them all by his almighty Hand, wonderful and worthy of their Maker: He discovered the Fountain and Spring of them all, and the great Law which is universally diffused through the whole System of Nature, which the almighty and wise Creator has commanded all Bodies to observe, viz. That every Particle of Matter attracts each other in a reciprocal duplicate Proportion of its Distance.

Astronomy is sometimes divided into the Old and New; the old *Astronomy* is that which supposes the Earth fixed and quiescent in the Center, and that the heavenly Bodies perform their Revolutions round it. This System was invented by *Ptolemy*, and called after him the *Ptolemaic System*, spoken of more largely before. The *New Astronomy*, is that which has been generally cultivated since *Copernicus*, who revived the *Pythagorean*, or true *Solar System*, which supposes the *Sun* to be the Center of Motion, and that the *Planets* and *Comets*,

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† *Strabo*. L. 17. p. 806.

at different Distances, and in different Periods of Time, revolve about him. Notwithstanding our modern *Astronomers* have followed this System in their nicest Observations, yet they have found out, that the *Sun* also in the Center, has its Revolution on its Axis once in twenty-eight Years, and that the Earth revolves about the *Sun* in 365 Days and about six Hours, to complete the Solar Year.

Chronology, of all other *Arts* and *Sciences*, is the most necessary Help to *History*, by which we know the Exactness of Time. We may here see, that the Heathen Accounts, which we have of the earliest Ages, and which I have reduced to an Agreement with the History of *Moses* itself, were taken from the Records of either *Thyoth* the *Egyptian*, or *Sanchoniathon* of *Berytus*, and that the 1656 Years which preceded the Flood, came short of so many *Julian* Years by above twenty-three. And in the like Manner after the Flood, all Nations, till the *Æra* of *Nabonassar*, *Anno Mundi* 1600, computed by 360 Days, (the *Egyptians* only excepted for a Century or two before :) The Difference between this *ancient Year* and the *Julian*, being five Days in each Year, besides the Day in every *Leap Year*. It is plain, that the Space of Time between the Flood and the Death of *Sardanapalus*, (in the Reigns of *Ahaz* King of *Judah*, and *Pekah* King of *Israel*, when the *Assyrian* Empire was dissolved) supposed to contain about 1600 *ancient Years*, will fall short of so many *Julian Years*, by five Days and a fourth Part of a Day in every Year, which amounts to one or two and twenty Years in the whole Time; at which Period, the learned Dean *Prideaux* began his *Connection* of the Old and New Testament.

Romulus formed the first *Roman Year*, but how he came by it, is not known; it consisted of but ten irregular Months*; some being not 20 Days, others above 25; yet they agreed with the *ancient Years* of other Nations, and consisted of 360 Days. The *Jewish Year*, in these early Times, had twelve Months, each Month 30 Days, much like the *Egyptians*, and 360 Days were the whole Year. And we do not any where read, that God himself by special Appointment, or his Servant *Moses*, ever made a Correction of it, as may seem to have been done at the Institution of the *Passover*†. The adding of the five Days to the Year, under *Affis*, was after the Children of *Israel* came out of *Egypt*; for though *Moses* was instructed in all the Learning of the *Egyptians*, this Discovery was made after his leaving them: That each Month had 30 Days and no more, is evident

* Thus *Ovid Fast.* Lib. I.

*Tempora digereret cum conditor Urbis, in Anno
Constituit menses quinque bis esse suo.*

† *Exod.* 12.

Plut. in *Vet.* p. 71.

dent from *Moses's* Computation of the Duration of the Flood ||. It began on the 17th Day of the second Month, and continued without any sensible Abatement 150 Days, † and then lodged the Ark on Mount *Ararat*, the 17th Day of the seventh Month; so that from the 14th of the second, to the 17th of the seventh, is five Months at 30 Days each, or 150 Days the Time of the Flood ‡. Twelve Months were a Year in the Time of *David* and *Solomon*, as appears by the Course of household Officers appointed by one §, and of Captains by the other ** ; which year was amooog them, without Emendation, to a much later Period, perhaps to the Time of our blessed Saviour, when all the World was alarmed by his Coming, and the Predictions of the *Prophets* disputed by the *Jews* : Therefore in my scriptural *Chronology*, in the Abstract of the Holy Bible, from the Creation of the World to our Saviour's Birth, the Account is no more than 3963 Years, which according to our modern *Chronologers*, is about 37 Years deficient in the Account ; Which according to the *Julian* Calender, I have considered in the other Parts of that Book, and made 4000 my Standard for the Year of the World, at our Saviour's Birth, according to the learned A. B. *Usher*.

Dean *Prideaux* ||| treats largely on the ancient *Jewish* Year from *Selden*, the *Talmud*, and *Mamonides* ; but this Year seems not to have been used till after the Captivity at soonest. Therefore it may be concluded, from what has been said, that the *Chronologers* do in general mistake, in supposing the ancient Year commensurates with either the *Julian* or *Gregorian*.

Now we are to understand, that the *Julian* Year, was that Space of Time consisting of 365 Days and six Hours, made use of by the *Egyptians* before spoken of, and took its Name from *Julius Cæsar*, who by the Assistance of *Sosigenes*, a Mathematician of *Alexandria*, amended the Calendar, then made use of by the *Romans*, by adding ten Days to the Year ; the Time by which the Season had anticipated thereby, a Year to consist of 365 Days and six Hours as above, and which has continued with us ever since he made his Entrance into the Island of *Great-Britain*, by the Name of the *Old Style*. But,

In the Time of *Pope Gregory XIII.* A. C. 1582, it was reformed by the Assistance of *Christopherus Clavius*, the two *Italian* Brothers, *Antonius* and *Alexyus Lilius*, and some other Mathematicians of les,

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Note,

|| *Gen.* vi. 11.

† *Verf.* 24.

‡ *Chap.* 8. 3, 4.

§ *Kings* iv. 5.

** *Chron.* 27.

||| Preface to his Connection, Vol. I.

Note, and the Reckoning set forward ten Days, in the Year 325, the Time by which the *Julian* Calendar had anticipated, since the *Nicene* Council was held, and was called on Account of those concerned in the Emendation, by the Name of *Gregorian*, *Pontifical*, *Clavian*, or *Lilian* Style; but most commonly the *New Style*. This Emendment was followed by other Nations soon after, and now it is generally received for the more regular Computation of Time.

According to an *Act* of *Parliament*, passed in the 24th Year of his Majesty King *George II.* for regulating the Commencement of the Year, and correcting the Calendar now in Use, taking Place the 3d Day of *September* 1752. When that Day in the old Account is to be called the 14th; so that all the intermediate nominal Days are annihilated, and the 1st of *January* in the Year 1753, and so on from Time to Time, shall be reckoned and accounted to be the first Day of the Year: And by the same *Act*, it is enacted, that, “ The Supputation, according to which the Year of our Lord beginneth on the 25th of *March*, shall not be made use of from and after the last Day of *December* 1751; and that the first Day of *January* next following the said last Day of *December*, shall be reckoned, taken, deemed, and accounted to be the first Day of the Year of our Lord 1752, and so on from Time to Time. The 1st Day of *January* in every Year, which shall happen in Time to come, shall be reckoned, taken, deemed, and accounted to be the first Day of the Year, and that each New Year shall accordingly commence, and begin to be reckoned from the first Day of every such Month of *January*.” And the same *Act* of *Parliament* doth direct that, “ The natural Days, next immediately following the 2d Day of *September*, in the Year 1752, shall be called, reckoned, and accounted to be the 14th Day of *September*, omitting for that Time only the eleven intermediate Days of the common Calendar.” And it is to be remembered, that this *Act* does in no wise effect the Quarter Days, although the *Feasts* on which they depend, are altered eleven Days sooner in the *New Style*, yet the old Days are marked in the *Almanacks* with Red Letters, and called *Old Michaelmas*, *Martinmas*, &c. which are to be observed in settling of *Estates*, *Payments* of *Annuities*, *Rents*, *Bonds*, *Notes*, &c. till such Accounts are become void, or agreed upon according to the *New Style*. And in computing the *Ages* of *Persons*, the *Reigns* of *Kings*, &c. and all other Events, are to be set forward eleven Days, previous to this Style. No *Act* or *Deed*, done or made before the Commencement of the *Reformed Calendar*, and which are to contain in Operation or Force for a Term of Years, including the *Æra* of this Emendation, are in the least to be influenced by it; but the nominal Days in the
Calendar,

Calendar, are the same in the *New* as in the *Old Style*, to be observed in the *Feasts* and *Fasts* of the *Church*.

In *Chronology*, there is a certain Period, or Series of Numbers, called a *Cycle*, which regularly proceed from the first to the last, and then return again to the first; and so circulate perpetually. After this Manner is the *Cycle* of the *Sun*, by which it is computed. He finishes a Revolution in 28 Years, at the End of which, the *Dominical*, or *Sunday Letter*, (so called from the Latin *Dominus*, Lord, because it shews the *Lord's Day*, or *Sunday Letter* throughout the Year) return to its former Place, and proceed in the same Order as before, according to the *Julian Calendar*. But the Reformation made therein by *Pope Gregory*, has occasioned a considerable Alteration in this *Cycle*; because every hundredth Year is common, consisting only of 365 Days; whereas according to the *Julian Account*, it is *Bissextile*, consisting of 366 Days. By this Means, the Series will be interrupted in their Circulation, in the *Gregorian Calendar*, or *New Style*; because every fourth Year is not *Bissextile* or Leap Year, as in the *Julian Account*, or *old Style*; it used to be where a whole Day is added, to make up the odd six Hours, whereby the Course of the Sun yearly, exceeds 365 Days, being inserted next after the 28th of *February*. Therefore a *Table* to point out the *Dominical Letters*, according to the *New Style*, may be here of some Use, reckoning from the Year 1700 to the Year 1800.

1	DC	5	FE	9	AG	13	CB	17	ED	21	GF	25	BA
2	B	6	D	10	F	14	A	18	C	22	E	26	G
3	A	7	C	11	E	15	G	19	B	23	D	27	F
4	G	8	B	12	D	16	F	20	A	24	C	28	E

As the Days of the Year are placed in a regular Series in the *Almanacks*, according to their Months; so each Day of the Week is also distinguished from each other, by one of the first seven Letters of the *Alphabet*: For Example, A is placed against the 1st of *January*, and so on to the seventh G; after which, the Letter A is placed against the eighth, and so on in a retrograde Order, till it has gone through all the Series of *Letters*, and then begin again anew to the End of the Year; so that if the Letter A, opposite the 1st of *January*, happen to be a *Sunday*, all the Days in the *Calendar*, which have an A put to them, will be *Sundays*, B *Mondays*, &c. And for this Use the *Dominical Letter* was made the Standard, or *Sunday Letter*. To find the Year of this *Cycle*, for any Year of the *Christian Æra*, add nine to the current Year of Christ, because the *Cycle* commenced nine Years before the *Christian Æra*, and divide the Number by 28; the

the Quotient will shew the Number of *Cycles*, which have revolved since the first Year before *Christ*; and the Remainder, if any, will shew the current Year of the *Cycle*, the last, or 28th Year, is the *Solar Cycle*.

By the Reformation of the *Calendar* under Pope Gregory, the Order of the *Dominical Letter* was interrupted in the *Gregorean Year*: For the Year 1582, which at the Beginning had *G* for its *Dominical Letter*, by retrenching ten Days after the fourth of *October*, came to have *C* for its *Dominical Letter*; and by having but one *Dominical Letter* for the Year 1700, therefore the *Dominical Letter* of the ancient *Julian Calendar* is four Places before that of the *Gregorean*. Whence to find the *Dominical Letter* according to the *Gregorean Year*, to the Year 1800 exclusive, we must use the following Rule: Divide the Year and its fourth Part (omitting Fractions) by 7, and subtract the Remainder from 7, which will give the *Index* of the *Dominical Letter*; but because the Years 1800, 1900, 2100, 2200, 2300, &c. according to the *Gregorean Calendar*, are 265 Days, and have each but one *Dominical Letter*, which according to the *Julian* would have had two, therefore the Course of the *Dominical Letters* will be changed, and the above Method will only hold good for this Century; after which a Number must be added to the Year and its fourth (omitting Fractions;) thus, reject the Figures or Cyphers to the Place of Hundreds, divide the remaining Figures or Cyphers by 4, from this Quotient subtract 1, and this Number subtracted from the hundred Years, and then this last Remainder taken from the least Number of Sevens possible, leaves a Number which must be added to the Year and its fourth. In order to find the *Dominical Letter* for ever: Suppose we want to know the *Dominical Letter* for the Year 1842; it is to be solved in the following Manner, $18 - 4 = 4$; from which subtracting 1, and the Remainder 3 from 18 gives 15, which being subtracted from 21, the nearest Sevens, gives 6, the Number to be added. Then to the given Year = 1842, add its fourth Part = 460, and the Number found = 6 will make 2308, which being divided by 7, gives 329 for the Quotient, and the Remainder is 5, which taken from 7, leaves 2, the *Index* of the Letter *B*, the *Dominical Letter* required.

The *Golden Number*, also called the *Cycle* of the *Moon*, and the *Metonic Cycle*, from its Inventor *Meton* the *Athenian*, who flourished 432 Years before *Christ*, comes next under our Consideration: This is a Period of 19 Years, beginning with, and increasing annually till it comes to 19, and then begins again; the Use of which is to find the *Change*, *Full*, and *Quarters* of the *Moon*; at the End of this Term of Years they will happen on the same Days of the Month as they did 19 Years before, though not at the same Hour, as *Meton* and

and the *Fathers* of the *primitive Church* thought; and therefore at the Time of the Council of *Nice*, when the Method of finding the Time for observing the Feast of *Easter* was established, the Numbers of the *Lunar Circle* were inserted in the *Calendar*, which upon Account of their excellent Use were set in golden Letters, and the Year of the Cycle called the *Golden Number* of that Year. To find which, add 1 to the Year of our Lord, and divide by 19, the Remainder is the currant Year of this Cycle, or *Golden Number*, but if nothing remain, 19 is the *Golden Number* for that Year.

The Cycle of *Indiction* has no Connection with the Celestial Bodies, but (as *Baronius* saith) is the Space of 15 Years; a Way of Reckoning appointed by *Constantine* the Great, in the room of the *Olimpiads*, that were made Use of by the ancient *Grecians*. The Emperor having reduced the Time, which the *Romans* used to serve, to this Period, he was obliged to impose an extraordinary Tax, for the Payment of those Soldiers who were discharged. It is of Service to us, in our *Almanacks*, not only for the Reading the *Roman History*, but for the setting right our *Chronology*; as the first Year of the *Christian Æra* happened in the fourth Year of this Cycle; if we add 3 to the current Year, and divide the same by 15, the Remainder will shew what Year of the Cycle it is.

The *Epaet* of the Year, is the *Moon's* Age at the Beginning of every Year, i. e. the Time between the first Minute of the first Day of *January*, and the last new Moon of the preceding Year: It is a Number, whereby is noted the Excess of the common Solar Year above the Lunar, and thereby may be found out the Age of the *Moon* every Year; for the Solar Year consisting of 365 Days, and the Lunar but of 454, the Lunations every Year get 11 Days before the Solar Year; but thereby in 19 Years the *Moon* compleating 20 Times 12 Lunations, gets up one whole Solar Year; and having finished that Circuit, begins again with the Sun, and so from 19 Years to 19 Years. For the first Year afterwards, the *Moon* will go before the *Sun* but 11 Days; the second Year 22 Days, which is called the *Epaet* for that Year; the third Year 33 Days, but 30 being an intire Lunation, cast that away, and 3 shall be that Year's *Epaet*; the next Year 14; and so adding yearly 11 Days, and casting away 30 as before, and you have the *Epaet* of the Year.

Having given a general Description of computing Time, and shewn the Difference between the *Old* and *New Stiles*, it may not be unacceptable to my Readers, to present them with a brief Account of the Origin of the Names of the Months of the Year, and of the Days of the Week. 1. *January* was so called from *Janus*, an ancient King of *Italy*, whom Heathenish Superstition had deified, to whom a Temple was built, and this Month dedicated. 2. *February* was so called from

from *Februa*; a Word denoting *Purgation by Sacrifices*; it being usual in this Month for the Priests of the *Heathen God Pan*, to offer Sacrifice and perform certain Rites, conducing, as was supposed, to the Cleansing or Purgation of the People. 3. *March* was so denominated from *Mars*, feigned to be the God of War, whom *Romulus*, Founder of the *Roman Empire*, pretended to be his Father. 4. *April* ab *aperiendo*, because in this Month all things are as it were opened and budded, and is generally supposed to derive its Name from the *Greek Appellation of Venus*, an imaginary Goddess, worshipped by the *Romans*. 5. *May* is said to have been so called from *Maia* the Mother of *Mercury*, another of their pretended *Ethnick Deities*, to whom in this Month they paid their Devotions. 6. *June* is said to take its Name from the Goddess *Juno*. 7. *July*, so called from *Julius Caesar*, one of the *Roman Emperors*, who gave his own Name to this Month, being born in the same, which before was called *Quintilis*, or the fifth. 8. *August*, so named in Honour of *Augustus Caesar*, another of the *Roman Emperors*; this Month was called *Sextilis*, or the Sixth*. The other four Months, namely, *September*, *October*, *November*, and *December*, retain their numerical † *Latin Names*, which according to the late Regulation of the Calendar will for the Future, be improperly applied.

As the idolatrous *Romans* thus gave Names to several of the Months, in Honour of their pretended *Deities*; so the like *Idolatry* prevailing among our *Ancestors*, induced them to call the Days of the Week by the Name of the *Idol* which on that Day they peculiarly worshipped. Hence, the first Day of the Week they called *Sunday* ‡, from their customary Adoration of the *Sun* upon that Day. The second Day they called *Monday*, from their usual Custom of worshipping the *Moon* on that Day. The third Day they named *Tues-*

* *Macrob. Saturn, lib. 1, Cap. 12.*

† The Method of distinguishing the Months by their numerical Order only, was the Practice of the *Jews* before the *Babylonian Captivity*, as we may see in the Scriptures to the Time of *Exra*.

‡ This Day among *Christians* is properly called the *Lord's Day*; because the *Sabbath* was changed at *Christ's Resurrection*; it seems to me to be no Matter of Dispute, to prove the Reason of this Change; the several Texts of Scripture here mentioned will sufficiently assert it. *Mat. xxviii. 1. Mark xvi. 1, 2, 9. Luke xxiv. 1. John xx. 1. Acts ii. 1. and xx. 7. 1 Cor. xvi. 12.* And though it is commanded that the *Sabbath* should be kept holy, *Gen. ii. 1, 2. Exod. xx. 8, 9, 10, 11. Isai. lviii. 13. Mat. xii. 8. Mark ii. 28. Luke vi. 5.* yet our Lord, the Lord of the *Sabbath*, consecrated the first Day of the Week to be a *Christian Sabbath* to the End of the World.

day, in Honour of one of their *Idols* called *Tuisco*. The *fourth* Day was called *Wednesday*, from the Appellation of *Woden*, another of their *Idols*. The *fifth* Day was called *Thursday*, from the Name of an *Idol* called *Thor*, to whom they paid their Devotions on that Day. The *sixth* Day was termed *Friday*, from the Name of *Friga*, an imaginary *Goddess*, by them worshipped. The *seventh* Day of the Week they called *Saturday*, as is supposed from *Saturn* or *Seater* ||, by them then worshipped. The succeeding Ages of *Popish* Superstition, not only indulged their Proselytes in the Use of such heathenish Names and Customs, but also invented and introduced other unsound and unscriptural Practices in Religion, and which the *Protestants* have not yet been able to root out; for when the Profession of the *Christian Religion* became national, Multitudes of the *Heathen Priests*, whose interests lay in the Performance of *Rites*, *Ceremonies*, and *Sacrifices*, embraced prevailing *Christianity* with selfish Views; and laboured early with too much Success to find employment for themselves, by imposing on the People a new set of *Ceremonies* and *Sacrifices*, bearing some Resemblance to those, which in their former State of *Heathenism*, they had been accustomed to. From this corrupt Source sprang the *popish* Sacrifice of the *Mass*, the Celebration of which at particular Times, and on particular Occasions, gave rise to the Vulgar Name of *Candlemas* § &c. and after this Manner they engrossed a Multitude of *Holy Days* for their own private Interest, many of which are fictitious and very obscure; among which are *Valentine's Day*, Feb. 24, so called from *Valentine*, a *Priest*, who was martyr'd Anno 271 for refusing to worship the *heathenish Gods*. Some say he was Author of the Custom used on this Day. *Corpus Christi Day*, is the *Thursday* next before *Trinity Sunday*, a great Feast among the *Papists*, who then carry the *Host*, or *Body* of *Christ*, as they pretend, in a solemn Manner. *Holy Cross*, Sept. 4, called *Holy Rood Day*, a *popish Holy-Day* kept in Remembrance of the Cross on which *Christ* suffered. *All-Souls*, Nov. 2. the Day on which the *Romish Church* prays for the *Souls* of all the *Saints*. *St. Martin the Bishop*, or *Martinmas Day*, Nov. 11, so called from the *Mass* celebrated in Honour of him, who died Ann. 399. These, together with *St. Lucian*, *St. Vincent*, *St. Gregory*, *St. Ambrose*, *St. Austin*, *St. Cyprian*, and many more, are observed by the *Romish Church*, with the same Strictness as the *Saints-Days* are commemorated with us; and retained by our Reformers in the *Calendar*, and consequently inserted into our *Almanacks* upon several Accounts,

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|| See *Verstegan* and *Sheringham*.

§ See my *Abstract H. Bible*, Page 69, *N. Test.* See also an Explanation of the moveable Feast, Page 70.

such

such as hiring Servants, taking Leases, and the like, long before their Days.

St. David's Day, the tutular Saint of *Wales*, is kept on the 1st of *March*, in Commemoration of him; who leading the *Welshmen* to Battle against the *Saxons* on that Day, got the Victory; they wear a Leak to distinguish themselves. St. Patrick, *March* 17, is a Day kept in Honour of him, who was an eminent Preacher of the Gospel in *Ireland*, and converted the Inhabitants. St. George, *April* 23, a Champion for *Christianity*, who was beheaded *Ann* 290 by Command of the Emperor *Dioclesian*. We have several political Days, or Days of Thanksgiving, Fasting and Humiliation, such as the *Powder-Plot*, &c. which by Virtue of several Acts of Parliament, are from Time to Time to be kept and observed. And we may also add his Majesty's *Birth-Day*, in drawing to our Conclusion.

*Auspicious ever be the Morn,
When Glory dawn'd on Cæsar born!
Behold! with what revolving Zeal,
He meditates our future Weal!
Preserve him, Heav'n! reward his Care,
And make Maturity his Heir.
Then let a GEORGE from GEORGE arise,
To gild with lineal Beams our Skies;
As round th' expanded Course of Heav'n,
Bright Suns succeeding Suns are driv'n.
If higher Joy kind Heav'n can give,
Long, longer still, must Cæsar live.*

As the *New Style* is ordered by Act of Parliament, to be used in *Great Britain*, &c. for the future, it will be necessary to shew the Method of finding *Easter* according to this Method of Computation, which may be performed by the following Rule.

Find the Epact for the Year proposed, and, if it be less than 24, subtract it from 74; but if it be 24, it must be taken from 73. Also if the Epact be 25, and the Golden Number between 12 and 19, both Numbers inclusive, the Epact must be taken from 73, and the Remainder will be *Easter Limit*, or the Day of the *Paschal Full Moon*. If the *Limit* do not exceed 31, the Day of the Full Moon will be in *March*; but if it exceeds 31, it will be in *April*; the Sunday after which Full Moon, will be *Easter-Day*.

But to save the Trouble of Calculation, we shall insert the following Table, by which *Easter-Day* may be found by Inspection from the present Time, till the Year 1899 inclusive, according to the *Gregorian Method*.

A Table to find *Easter* till the Year 1899 inclusive.*Sunday Letters.*

G.Numb.	A.	B.	C.	D.	E.	F.	G.
1	April 16	17	18	19	20	14	15
2	April 9	3	4	5	6	7	8
3	March 26	27	28	29	23	24	25
4	April 16	17	11	12	13	14	15
5	April 2	3	4	5	6	March 31	April 1
6	April 23	24	25	19	20	21	22
7	April 9	10	11	12	13	14	8
8	April 2	3	March 28	29	30	31	April 1
9	April 16	17	18	19	20	21	22
10	April 9	10	11	5	6	7	8
11	March 26	27	28	29	30	31	25
12	April 16	17	18	19	13	14	15
13	April 2	3	4	5	6	7	8
14	March 26	27	28	22	23	24	25
15	April 16	10	11	12	13	14	15
16	April 2	3	4	5	March 30	31	April 1
17	April 23	24	18	19	20	21	22
18	April 9	10	11	12	13	7	8
19	April 2	March 27	28	29	30	31	April 1

To make use of the preceding *Table*, find the *Sunday Letter* for the Year in the uppermost Line, and the *Golden Number*, or *Prime*, in the first Column ; and in the common Angle of Meeting, you have the Day of the Month on which *Easter* falleth that Year. But *note*, that the Name of the Month is set on the left Hand, or just with the Figure, and followeth not as in other Tables, by Descent, but Collateral.

F I N I S.





